2020 Fire Season Considerations and Outlook

SWCC Predictive Services

Updated: 1/30/20
Historical Southwest Area Fire Activity

- Fires about a 50/50 split between human & lightning caused
- Human caused fires more prevalent in the spring, coincident with windy & dry conditions
- Lightning caused fires more prevalent from June onward, coincident with the approaching monsoon

The number of 1000+ acre fires annually is now heavily influenced by management strategies that allow for free-burning fire to play its natural role in the ecosystem (green). Total large fires and acres burned are no longer a good measure of fire season severity.
Seasonal Fire Potential Main Factors

1. Drought
2. Fine Fuels Condition
3. Seasonal Temperature & Precipitation
4. Spring & early Summer Weather Patterns
5. Monsoon
Fire Season 2020: Drought

- Up/down drought over the past 6 months...definite increase north
- “Severe Drought” across northeast AZ / northwest NM with moderate drought surrounding this region eastward into northeastern NM
- Official Drought outlook – to persist overall across northern sections at least through April
- Drought that exists impacting mainly heavier fuels from northeastern AZ into northern NM - longer-term issues (hydro), shorter-term (lee of NM cntrl mtns)
Fire Season 2020: Fine Fuels

- Normal - Below Normal carry-over overall of warm-season fine fuels driven by low 2019 (main growing season (JUL-SEP) precipitation totals)

- Carr RAWS saw 31” in ’19, however 60% of it occurred outside of JUL-SEP

- Some concerns of residual fine fuel from last season in the Sonoran Desert

- Despite poor precipitation last summer & fall, the recent and continued up-down weather pattern will likely contribute to widespread spring green-up

- **Minimum carry-over fine fuels + decent spring growth = potentially significant amount of fine fuels to potentially carry fire in some areas...but likely not as noteworthy compared to past**

- **Fine fuel loading and continuity is normal to Below Normal, esp. across the northern half or so of Arizona and the western ½ of NM**
Fire Season 2020: NOV 2019 thru Late JAN 2020
Temperature & Precipitation

- Overall high temperatures have been close to Normal during the period with notably wetter than normal conditions across the southwestern ½ or so of the region.
- Some Drier than normal areas the past 3 months across parts of the eastern plains.
Fire Season 2020: Past 30 Days

Temperature & Precipitation

- Overall some **cooler** areas west and across nrn NM, **milder** east, wetter along/near divide region, parts of cntrl/ern NM
Fire Season 2020: ERC Values

- ERC values below to slightly below average area-wide at present
### ARIZONA SNOTEL Snow Water Equivalent Update Graph

**As of Thursday: January 30, 2020**

<table>
<thead>
<tr>
<th>Basin</th>
<th>Snow Water Equivalent Percent of Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verde River Basin</td>
<td>125%</td>
</tr>
<tr>
<td>San Francisco Peaks</td>
<td>155%</td>
</tr>
<tr>
<td>Central Mogollon Rim</td>
<td>95%</td>
</tr>
<tr>
<td>Little Colorado - Southern Headwaters</td>
<td>99%</td>
</tr>
<tr>
<td>Upper Salt River Basin / White Mountains</td>
<td>90%</td>
</tr>
<tr>
<td>San Francisco / Upper Gila River Basin</td>
<td>99%</td>
</tr>
<tr>
<td>Chuska Mountains</td>
<td>*</td>
</tr>
</tbody>
</table>

**Legend:**
- <70%
- 70-90%
- 91-110%
- 111-130%
- >130%

### NEW MEXICO SNOTEL Snow Water Equivalent Update Graph

**As of Thursday: January 30, 2020**

<table>
<thead>
<tr>
<th>Basin</th>
<th>Snow Water Equivalent Percent of Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rio Chama River Basin</td>
<td>112%</td>
</tr>
<tr>
<td>Upper Rio Grande Basin</td>
<td>100%</td>
</tr>
<tr>
<td>Sangre de Cristo Mountain Range Basins</td>
<td>124%</td>
</tr>
<tr>
<td>Jemez River Basin</td>
<td>106%</td>
</tr>
<tr>
<td>San Francisco River Basin</td>
<td>124%</td>
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<tr>
<td>Gila River Basin</td>
<td>107%</td>
</tr>
<tr>
<td>Mimbres River Basin</td>
<td>79%</td>
</tr>
<tr>
<td>Pecos River Basin</td>
<td>112%</td>
</tr>
<tr>
<td>San Juan River Headwaters</td>
<td>99%</td>
</tr>
<tr>
<td>Animas River Basin</td>
<td>108%</td>
</tr>
<tr>
<td>Cimarron River Basin</td>
<td>112%</td>
</tr>
<tr>
<td>Zuni/Bluewater River Basin</td>
<td>106%</td>
</tr>
<tr>
<td>Rio Hondo Basin</td>
<td>38%</td>
</tr>
<tr>
<td>Chuska Mountains</td>
<td>*</td>
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</tbody>
</table>

**Notes:**
- Provisional data subject to revision.
Fire Season 2020: FEB-MAY
Temp & Precip Anomalies

A variable pattern with some lengthy periods of **mild temps** (focused west) being interrupted by **cooler** temperatures (focused east)

Expect **Dry/drier conditions** west of the divide to have increased variability by March, esp. April with increased likelihood for variability by spring

Generally Above Average **warmth** many areas with most significant periods of **Below Normal** temps focused east, and a higher **moisture** signal east of the divide northward into GB/Rockies

A neutral ENSO pattern is expected to linger into at least mid-late spring - weak La Nina possible by late summer/fall
Fire Season 2020

Winter - mid Spring Weather Pattern Impacts

- A variable weather pattern overall with short-mid term west-coast ridging leading to periods of warmth focused west and cool/cold fronts glancing/impacting east

- A periodically active subtropical jet as well as active northern stream jet will provide periods of more moist weather to the region, esp. Feb/Apr...likely leading to periods of wetter than normal conditions

- Early indications suggest a Normal-Above Normal & timely monsoon with Above average moisture across both srn AZ and the divide region
For Reference: Median dates for end of ‘large fire’ season.

Potential for La Niña conditions to arrive by mid-late summer and continue into the fall...
2020 Fire Season Factors Summary

1. **Drought** – Severe drought northern AZ, 4 Corners into northern NM

2. **Fine Fuels Condition** – Normal to Below Normal loading and continuity, especially across the northern half of AZ into western NM

3. **Seasonal Temperature & Precipitation** – Generally warmer than normal overall, cooler overall east. More moist along/east of the divide region northward into the Great Basin/central Rockies

4. **Spring & early Summer Weather Pattern** – Off-On active pattern into mid-late spring with a periodic active northern jet (though predominant west coast ridging) and an active subtropical jet at times. Expect increased moisture and widely fluctuating temperatures focused east of the divide with a tad less variability across AZ...although some periods of cooler/near normal temperatures and bouts of moisture are likely (esp FEB/APR)

5. **Monsoon** – Expect it to be timely, Normal to Above Normal.

**Bottom Line:** An up & down pattern overall through the spring to likely keep the heavies out of the picture until late May/June with no real focus at this time.
END

SWCC Predictive Services

Next Update: Late FEB '20

Contact: SWCC Predictive Services
505-842-3473

Consult the Outlooks Page (Below) for Updated Information Through Fire Season:
http://gacc.nifc.gov/swcc/predictive/outlooks/outlooks.htm